CNA Webinar Series: Progress in Practice

Discuss the basics in pain assessment: A case-based approach

Brenda Poulton
Pain Management, Royal Columbian Hospital, Fraser Health
Adjunct Professor, UBC, School of Nursing

Rosemary Wilson
Assistant Professor, School of Nursing
Department of Anesthesiology and Perioperative Nursing, Queen's University

CANADIAN NURSES ASSOCIATION

February 27, 2014

Lisa Ashley, RN, CCHN(C), MEd
Senior Nurse Advisor,
Policy and Leadership
Canadian Nurses Association

Brenda Poulton, RN, MN, NP
Pain Management, Surgical Program
Royal Columbian Hospital, Fraser Health
Adjunct Professor School of Nursing UBC

Rosemary Wilson, RN (EC), PhD
Assistant Professor, School of Nursing
Department of Anesthesiology and Perioperative Nursing
Queen's University

Pain Assessment Foundation for Effective Management

Pain is as diverse as man. One suffers as one can.
Victor Hugo

Topics for discussion

- Overview of pain and common misconceptions
- Comprehensive pain assessment is the foundation to providing appropriate management
- Practical pain assessment tools and clinical use

Patients in pain

Pain is one of the five most common reasons for seeking out medical attention and is one of the most disabling and costly conditions in North America.

- 11% of adults and 8% of children in the general population suffer from chronic pain
  (Harstall, C. Ospina, M. How prevalent is chronic pain? *IASP: Pain Clinical Updates, 2003 11*(2).)
- Recent Canadian studies indicate a prevalence of chronic pain of 18%–35%, 80% of which is moderate or severe.
  (Reitsma ML, Tranmer JE, Buchanan DM, Vandenkerkhof EG. The prevalence of chronic pain and pain-related interference in the Canadian population from 1994 to 2008. Chronic Dis Inj Can 2011;31(4):157-64.)
- In the United States, costs and incapacities due to low back pain alone among the age group of 18 to 55 years (the most active of the workforce) are greater than those associated with cancer, cardiovascular diseases, brain stroke, and AIDS together
  (Dagenais, S. A systematic review of low back pain cost of illness studies in the United States and internationally, Spine 2008; 8(1); 8-20.)

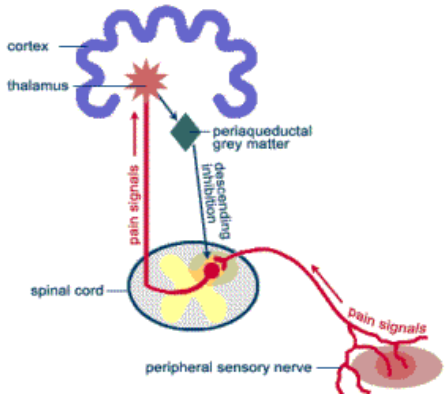
Chronic Post-Surgical Pain

Surgery	Incidence of chronic pain
Amputation	50-80%
Thoracotomy	30-40%
Coronary artery bypass surgery	30-50%
Total Knee Replacement	20-25%
Caesarean section	10%
Inguinal hernia repair	10-30%
Mastectomy	20-30%
Hysterectomy	17-32%

Macintrye and Schug (2007) Acute Pain Management 3rd Ed.; T. J. Van de Ven and H. John Hsia (2012) Causes and prevention chronic postsurgical pain. Curr Opin Crit Care Aug 2012 18(4); Brandsberg et al. (2007) Risk factors for chronic pain after hysterectomy : a nationwide questionnaire and database study. Anesth 106(5); Wilde et al. (2014) Chronic pain after knee replacement: Prevalence, onset and impact. Ortho Proceedings 2014 96-B (Supp 4).

Classification of Pain

- Duration
  - Acute
  - Chronic
- Condition
  - Low Back Pain
  - Painful Diabetic Neuropathy
  - Cancer pain
- Physiology
  - Nociceptive
  - Neuropathic

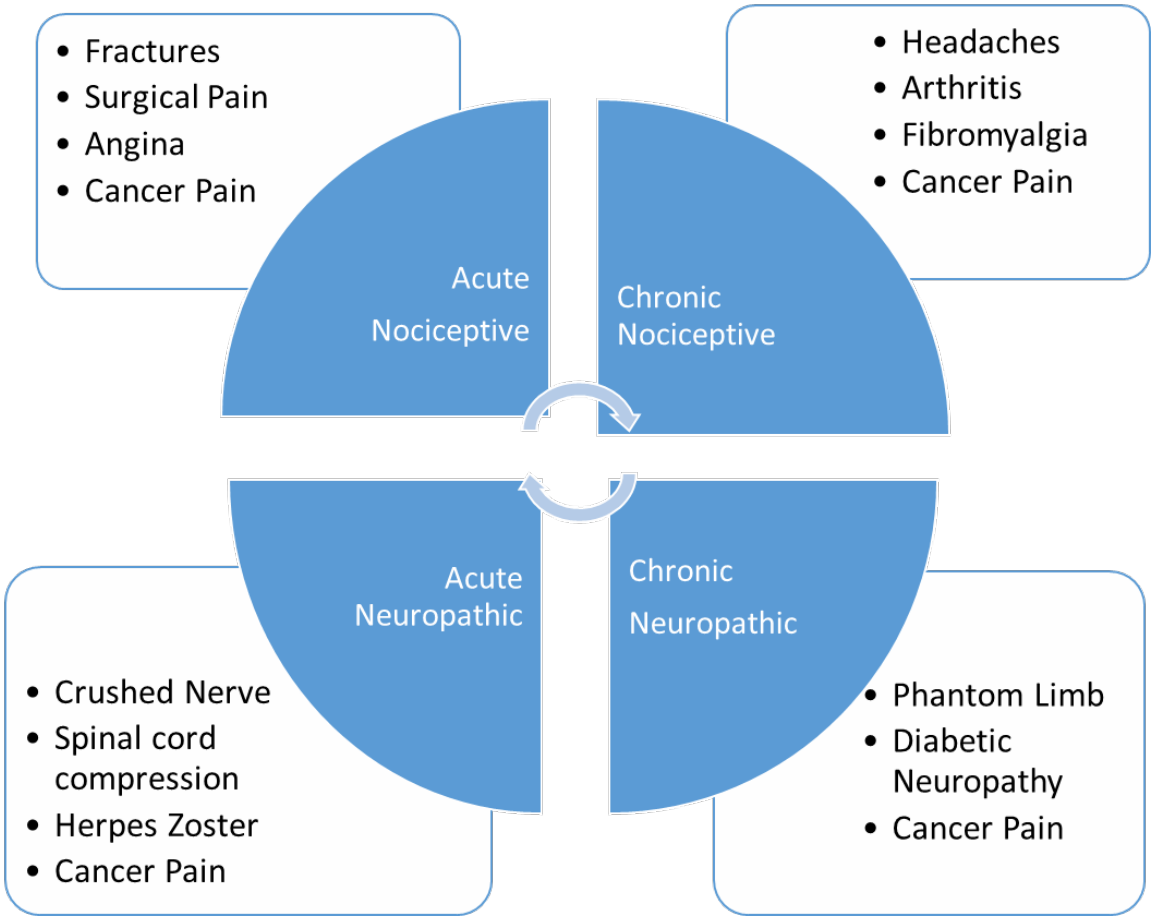


Types of Pain

Nociceptive pain: Caused by activity in neural pathways in response to potentially tissue-damaging stimuli

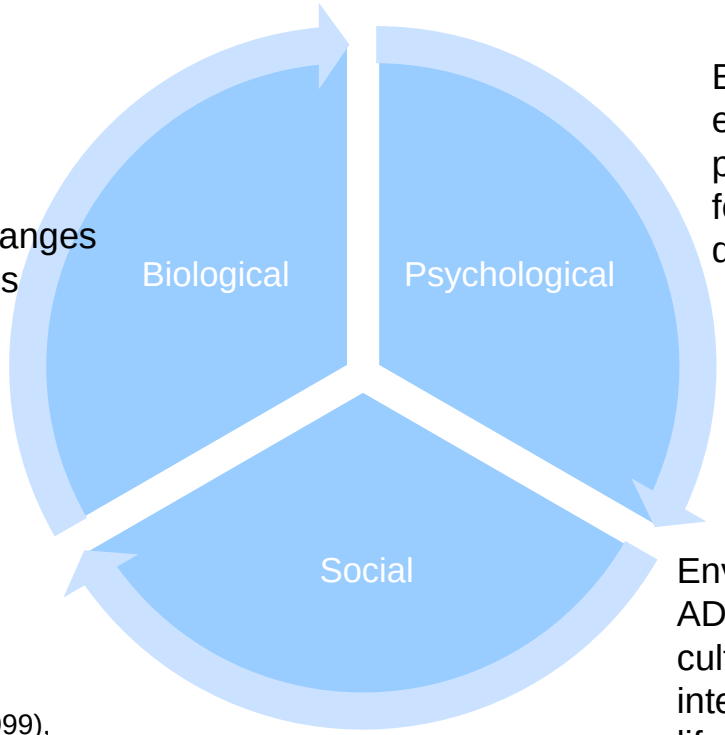
Neuropathic pain: Pain arising as a direct consequence of a lesion or dysfunction in the nervous system

Incident/episodic pain: pain pathways are activated intermittently



PAIN
Multidimensional & Individual Experience

Tissue injury, nociception,
neurophysiological/chemical changes
pre-existing health & pain issues
Genetic predisposition



Beliefs, attitudes,
expectations, coping,
past experience,
fear, anxiety,
depression

Environmental stressors,
ADL's, social supports,
cultural factors, family &
interpersonal relationships,
life trauma

R. Gatchel (2004) Turk & Flor (1999),
Turk & Okifuji (2002)

Myths and Fables in Pain Assessment

- The clinician is in the best position to judge the existence and severity of the patient's pain
- Comparable stimuli produces comparable pain in different people
- Visible signs always accompany pain and can be used to judge its severity and existence

The clinician is in the best position to judge the existence and severity of the patient's pain

Self-report is the GOLD STANDARD

- Validation of pain experiences builds trust

- Problematic relationship between patient's perceptions of pain and clinician perceptions
- Patient/nurse agreement 7% in severe, 51% in moderate and 82% in mild pain ratings Grossman et al. J Pain Symp Man: 1991; 6(2); 53-57.
- Agreement with pain ratings in more empathetic nurses Watt-Watson et al. Nursing Research: 2000; 49(4): 191-200.

Comparable stimuli produces comparable pain in different people

- Individual differences in pain *thresholds* Clark & Bindra. Can J Psych: 1956; 69-76.
- Lack of uniform relationship between tissue damage and pain Loeser & Melzack: Lancet: 1999; 9164; 1607-1609
- Higher-than-expected pain reports warrant reassessment

Visible signs always accompany pain and can be used to judge its severity and existence

- Behavioural and emotional adaptation to pain does not necessarily mean absence of pain
- Stoic or exhausted response
- Physiologic adaptation toward homeostasis despite severe pain
- “Observations of behaviour and vital signs should not be used instead of self-report”

Clinical Practice Guidelines for Acute Pain Management: AHCPR

The “Why” of Comprehensive Pain Assessment

- Patients have the right to *the best possible evidence-based pain assessment and management including relevant bio-psychosocial components*
  (Guiding principles of BPG: RNAO, 2013. pp. 18)
- Establishes trust and improves satisfaction with care
- Individualized pain management plan, which include the patient, family and interdisciplinary team (if indicated)
- Patient-specific evaluation of interventions provided

Case Study

Evelyn

- 70 years old, retired teacher, married with two grown sons
  - Slipped on ice 3 days ago: right femoral neck fracture
  - Right total hip arthroplasty late last night
  - Post-operative analgesics: Hydromorphone 1-2mg PO q3h PRN pain; acetaminophen 650mg PO q6h; celecoxib 100mg PO q12h
- History includes: breast cancer (stage IV), chronic low back pain, osteoarthritis (knees, hips hands), and chronic insomnia.

Comprehensive Pain Assessment

- **Screen for the presence or risk of any type of pain**
  - Each encounter
  - Change in medical condition
  - Prior to, during and after procedure

- **Comprehensive Pain Assessment on persons with pain**
  - Previous pain history
  - Current pain symptoms & characteristics
  - Functional impact
  - Psychosocial impact

RNAO (2013). *Clinical Best Practice Guidelines: Assessment and management of pain,* (3rd ed.). http://rnao.ca/sites/rnao-ca/files/AssessAndManagementOfPain2014.pdf

The Adapted Pain Assessment Acronym

O - onset

P – provokes, palliates

Q – quality

R – region, radiation

S – severity

T – timing/treatment

U – understanding/impact

V – values

…..and **C** – for communication!

RNAO (2013). *Clinical Best Practice Guidelines: Assessment and management of pain,* (3rd ed.). http://rnao.ca/sites/rnao-ca/files/AssessAndManagementOfPain2014.pdf

IMMPACT Recommendations

Core domains for clinical trials of chronic pain efficacy and effectiveness

- Pain: *MPQ, BPI, VAS/NRS*
- Physical functioning: *HRQoL, BPI, disease specific (e.g.: WOMAC)*
- Emotional functioning: *POMS, BDI*
- Participant ratings of global improvement: PGIC
- Symptoms and adverse effects
- *Participant disposition*

www.immpact.org

Turk et al. Core outcome domains for chronic pain clinical trials: IMMPACT recommendations. 2003 Pain 106, 337-345.
Dworkin et al. Core outcome measures for chronic pain clinical trials: IMMPACT recommendations. 2005 Pain ;113: 9-19.

Measures of Pain Intensity: Uni-dimensional tools

- Quick and easy assessment of intervention efficacy
- Common metric of 0-10 adopted by many centres
- Standard tools – reliability/validity well documented
  - Visual Analogue Scale (VAS)
  - Numeric Rating Scale (NRS): 0 to 10
  - Verbal Rating Scale (VRS): No pain, mild, moderate, severe, very severe
    - Present Pain Intensity (PPI): No pain, mild, discomforting, distressing, horrible, excruciating
  - Faces Pain Scale – revised (FPS-R)

On a scale of 1 to stepping on a lego, how much pain are you in?

Multidimensional tools: Brief Pain Inventory

- 7 interference items; 4 intensity items; 2 items assessing pain treatment effectiveness
  - 0-10 on most items
  - 24 languages
  - Useful in the assessment of impact on ADLs
  - 5-8 minutes to complete

http://www.mdanderson.org/education-and-research/departments-programs-and-labs/departments-and-divisions/symptom-research/symptom-assessment-tools/brief-pain-inventory.html

Cleeland CS, (1991)

Short Form Brief Pain Inventory

STUDY ID# _____ HOSPITAL # _____

DO NOT WRITE ABOVE THIS LINE

Brief Pain Inventory (Short Form)

Date: ____/____/____ Time: ____

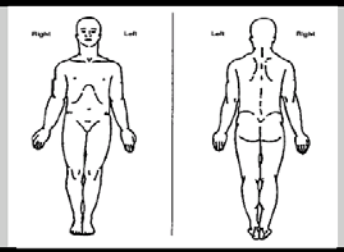
Name: _____ _____ _____

Last First Middle Initial

1. Throughout our lives, most of us have had pain from time to time (such as minor headaches, sprains, and toothaches). Have you had pain other than these every-day kinds of pain today?

1. Yes 2. No

2. On the diagram, shade in the areas where you feel pain. Put an X on the area that hurts the most.



3. Please rate your pain by circling the one number that best describes your pain at its worst in the last 24 hours.

0 1 2 3 4 5 6 7 8 9 10
No Pain — Pain as bad as you can imagine

4. Please rate your pain by circling the one nuimber that best describes your pain at its least in the last 24 hours.

0 1 2 3 4 5 6 7 8 9 10
No Pain — Pain as bad as you can imagine

5. Please rate your pain by circling the one number that best describes your pain on the average.

0 1 2 3 4 5 6 7 8 9 10
No Pain — Pain as bad as you can imagine

6. Please rate your pain by circling the one number that tells how much pain you have right now.

0 1 2 3 4 5 6 7 8 9 10
No Pain — Pain as bad as you can imagine

7. What treatments or medications are you receiving for your pain?

8. In the last 24 hours, how much relief have pain treatments or medications provided? Please circle the one percentage that most shows how much relief you have received.

0% No Relief 10% 20% 30% 40% 50% 60% 70% 80% 90% 100% Complete Relief

9. Circle the one number that describes how, during the past 24 hours, pain has interfered with your:

A. General Activity

0 1 2 3 4 5 6 7 8 9 10
Does not Interfere — Completely Interferes

B. Mood

0 1 2 3 4 5 6 7 8 9 10
Does not Interfere — Completely Interferes

C. Walking Ability

0 1 2 3 4 5 6 7 8 9 10
Does not Interfere — Completely Interferes

D. Normal Work (includes both work outside the home and housework)

0 1 2 3 4 5 6 7 8 9 10
Does not Interfere — Completely Interferes

E. Relations with other people

0 1 2 3 4 5 6 7 8 9 10
Does not Interfere — Completely Interferes

F. Sleep

0 1 2 3 4 5 6 7 8 9 10
Does not Interfere — Completely Interferes

G. Enjoyment of life

0 1 2 3 4 5 6 7 8 9 10
Does not Interfere — Completely Interferes

Multi-dimensional tools: Short-Form McGill Pain Questionnaire

Developed in 1984, revised in 2009

- SF-MPQ: 15 + 2 items (VAS, PPI)
  - Many languages
  - None, mild, moderate severe
  - Recall – current time

Melzack, R. The short-form McGill Pain Questionnaire. Pain 1987; 30(2), 191-7.

- SF-MPQ-2: 22 items
  - 14 languages
  - Rated on intensity scale 0-10
  - 2-5 minutes to complete
  - Recall - during the past week

Dworkin RH, Turk DC, Revicki DA, Harding G, Coyne KS, Peirce-Sandner S, Bhagwat D, Everton D, Burke LB, Cowan P, Farrar JT, Hertz S, Max MB, Rappaport BA, Melzack R. Development and initial validation of an expanded and revised version of the Short-form McGill Pain Questionnaire (SF-MPQ-2). Pain. 2009;144:35-42

Study #:	
Date:	

Short-Form McGill Pain Questionnaire:

I. Pain Rating Index (PRI):

The words below describe average pain. Place a check mark (✓) in the column that represents the degree to which you feel that type of pain. Please limit yourself to a description of the pain in your pelvic area only:

		None		Mild		Moderate		Severe
a	Throbbing	0	1		2		3	
	Shooting	0	1		2		3	
	Stabbing	0	1		2		3	
	Sharp	0	1		2		3	
	Cramping	0	1		2		3	
	Gnawing	0	1		2		3	
	Hot-Burning	0	1		2		3	
	Aching	0	1		2		3	
	Heavy	0	1		2		3	
	Tender	0	1		2		3	
	Splitting	0	1		2		3	
b	Tiring-Exhausting	0	1		2		3	
	Sickening	0	1		2		3	
	Fearful	0	1		2		3	
	Punishing-Cruel	0	1		2		3	

II. Present Pain Intensity (PPI)–Visual Analog Scale (VAS). Tick along scale below for pelvic pain:

No pain ——————————— Worst possible pain

III. Evaluative overall intensity of total pain experience. Please limit yourself to a description of the pain in your pelvic area only. Place a check mark (✓) in the appropriate column:

Evaluative		
0	No pain	
1	Mild	
2	Discomforting	
3	Distressing	
4	Horrible	
5	Excruciating	

IV. Scoring:

		Score
I-a	S-PRI (Sensory Pain Rating Index)	
I-b	A-PRI (Affective Pain Rating Index	
I-a+b	T-PRI (Total Pain Rating Index)	
II	PPI-VAS (Present Pain Intensity-Visual Analog Scale)	
III	Evaluative overall intensity of total pain experience	

DN4 Neuropathic Pain Diagnostic Questionnaire

Q1: Is the pain:

Burning?	Yes / No
Painful cold?	Yes / No
Electric shocks?	Yes / No

Q2: Is the pain associated with:

Tingling?	Yes / No
Pins and needles?	Yes / No
Numbness?	Yes / No
Itching?	Yes / No

Q3: Is the pain localized in an area where:

-Hypoesthesia to touch?	Yes / No
-Hypoesthesia to pinprick?	Yes / No

Q4: Can the pain be caused or increased by:

-Brushing?	Yes / No

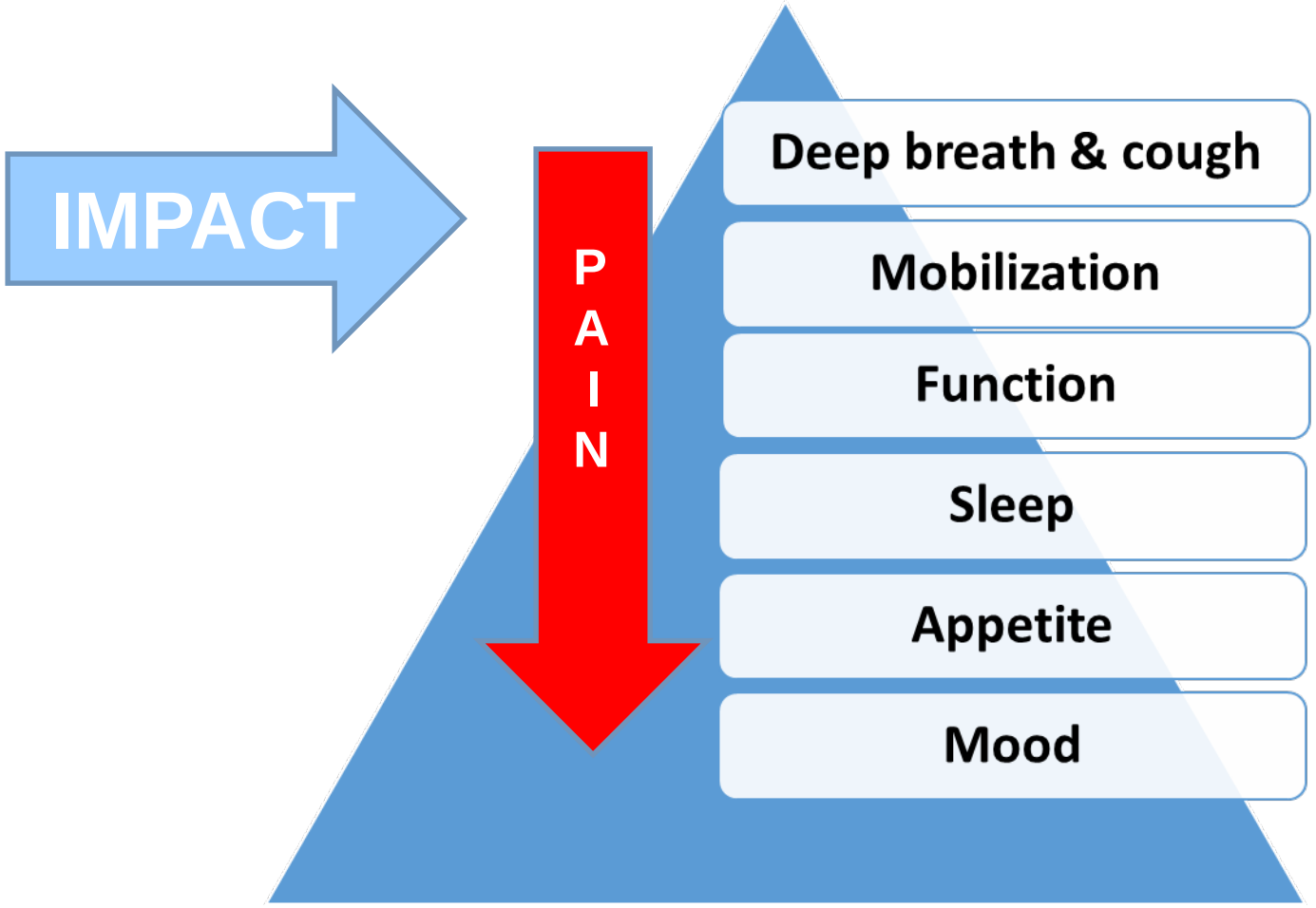
Bouhassira D *et al*. *Pain* 2005; 114(1-2):29-36.

Yes = 1 point No = 0 points
Score ≥4/10 neuropathic pain
Sensitivity 83% Specificity 90%

Evelyn's comprehensive pain assessment

- Risk?
- Previous pain history
- Current pain symptoms & characteristics
  - OPQRSTUV and C
  - Uni-dimensional and multi-dimensional tools
  - Effectiveness of interventions
- Functional impact
  - BPI-I, sleep quality, engagement in postoperative activities
- Psychosocial impact
  - Useful tools: PHQ-9 (screening for depression), GAD-7 (anxiety) PGIC, IEQ

Goals of Pain Management



Empathy is really the opposite of spiritual meanness. It's the capacity to understand that every war is both won and lost. And that someone else's pain is as meaningful as your own.

Barbara Kingsolver

Guide to measurement tool acronyms

Acronym	Tool	Measures
MPQ	McGill Pain Questionnaire	Pain intensity, quality
BPI	Brief Pain Inventory	Pain intensity, interference
NRS	Numerical rating scale	Pain intensity
HRQoL (SF 12, 36)	Health related quality of life	Quality of life: physical, mental
POMS	Profile of mood states	Mood state
BDI	Beck Depression Inventory	Depression severity
PGIC	Patient global impression of change	Overall change in pain
PHQ-9	Patient health questionnaire	Depression screening
GAD-7	Generalized anxiety disorder scale	Anxiety screening
DN-4	Neuropathic pain diagnostic questionnaire	Presence of neuropathic type pain

On-line Resources

RNAO – Assessment and Management of Pain

http://rnao.ca/bpg/guidelines/assessment-and-management-pain

Canadian Pain Society

http://www.canadianpainsociety.ca/en/index.html

PainBC - Resources for healthcare providers

http://www.painbc.ca/resources-for-health-care-providers

For more information:

Brenda Poulton
Brenda.Poulton@fraserhealth.ca

Rosemary Wilson
rosemary.wilson@queensu.ca

Photo credits: iStock

CANADIAN NURSES ASSOCIATION

Upcoming Webinar

Make Changes to palliative and end-of-life care in Canada

March 10, 2014, 12-12:45 pm ET

CANADIAN NURSES ASSOCIATION

Thank you!

CANADIAN NURSES ASSOCIATION